10/031,905 Search Strategy

(FILE 'HOME' ENTERED AT 07:47:31 ON 18 AUG 2004)

FILE 'REGISTRY' ENTERED AT 07:47:44 ON 18 AUG 2004 L1 1 S 9013-18-7

FILE 'MEDLINE, AGRICOLA, CAPLUS, BIOSIS, EMBASE, WPIDS' ENTERED AT 07:48:40 ON 18 AUG 2004

2921 S L1

531 S L2 AND (HUMAN OR SAPIENS)

406 DUP REM L3 (125 DUPLICATES REMOVED)

3 S L4 AND (FACL5 OR ACS5) L5

O S (FATTY (W) ACID (W) COENZYME (W) A! (W) LIGASE (W) 5!) OR (AC 29 S (FATTY (W) ACID (W) COENZYME (W) A# (W) LIGASE (W) 5#) OR (AC L6 L7

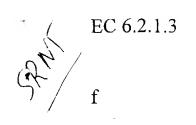
L817 DUP REM L7 (12 DUPLICATES REMOVED)

6 S L8 AND (HUMAN OR SAPIENS) L9

L2

L3

L4



IUBMB Enzyme Nomenclature

EC 6.2.1.3

Common name: long-chain-fatty-acid—CoA ligase

Reaction: ATP + a long-chain carboxylic acid + CoA = AMP + diphosphate + an acyl-CoA

Other name(s): acyl-CoA synthetase; fatty acid thiokinase (long chain); acyl-activating enzyme; palmitoyl-CoA synthase; lignoceroyl-CoA synthase; arachidonyl-CoA synthetase; acyl-coenzyme A synthetase; acyl-coenzyme A ligase; palmitoyl coenzyme A synthetase; thiokinase; palmitoyl-CoA ligase; acyl-coenzyme A ligase; fatty acid CoA ligase; long-chain fatty acyl-coenzyme A synthetase; olcoyl-CoA synthetase; stearoyl-CoA synthetase; long-chain fatty acyl-CoA synthetase; long-chain acyl-coA synthetase; fatty acid elongase; LCFA synthetase; pristanoyl-CoA synthetase; ACS3: long-chain acyl-CoA synthetase I; long-chain acyl-coenzyme A synthetase; FAA1

Systematic name: acid:CoA ligase (AMP-forming)

Comments: Acts on a wide range of long-chain saturated and unsaturated fatty acids, but the enzymes from different tissues show some variation in specificity. The liver enzyme acts on acids from C_6 to C_{20} ; that from brain shows high activity up to C_{24} .

Links to other databases: <u>BRENDA</u>, <u>EXPASY</u>, <u>KEGG</u>, <u>UM-BBD</u>, <u>ERGO</u>, CAS registry number: 9013-18-7

References:

- 1. Bakken, A.M. and Farstad, M. Identical subcellular distribution of palmitoyl-CoA and arachidonoyl-CoA synthetase activities in human blood platelets. *Biochem. J.* 261 (1989) 71-76. [Medline UI: 89374118]
- 2. Hosaka, K., Mishima, M., Tanaka, T., Kamiryo, T. and Numa, S. Acyl-coenzyme-A synthetase I from *Candida lipolytica*. Purification, properties and immunochemical studies. *Eur. J. Biochem.* 93 (1979) 197-203. [Medline UI: 79169257]
- 3. Nagamatsu, K., Soeda, S., Mori, M. and Kishimoto, Y. Lignoceroyl-coenzyme A synthetase from developing rat brain: partial purification, characterization and comparison with palmitoyl-coenzyme A synthetase activity and liver enzyme. *Biochim. Biophys. Acta* 836 (1985) 80-88. [Medline UI: 85280527]
- 4. Tanaka, T., Hosaka, K., Hoshimaru, M. and Numa, S. Purification and properties of long-chain acylcoenzyme-A synthetase from rat liver. *Eur. J. Biochem.* 98 (1979) 165-172. [Medline UI: 79236369]

[EC 6.2.1.3 created 1961, modified 1989]

Return to EC 6.2.1 home page

SRM

	Туре	Hits	Search Text	DBs	Time Stamp
H	BRS	0	(FACL5 or ACS5) and Yamashita.in.	USPAT; US-PGPUB; EPO; JPO; DERWENT	2004/08/18 07:33
7	BRS	2	20030073129.pn.	USPAT; US-PGPUB; EPO; JPO; DERWENT	2004/08/17 14:36
ю	BRS	2	6639063.pn.	USPAT; US-PGPUB; EPO; JPO; DERWENT	2004/08/18 07:26
4	BRS	100	FACLS or ACSS or (acyl-CoA adj synth\$ adj 5!) or (fatty USPAT; US-PGPUB; EPO; adj acyl-coA adj ligase) or 6.2.1.3	USPAT; US-PGPUB; EPO; JPO; DERWENT	2004/08/18 07:36
2	BRS	63	12 and (human or sapien\$)	USPAT; US-PGPUB; EPO; JPO; DERWENT	2004/08/18 07:38
9	BRS	0	(tang.in. or hillman.in. or bandman.in. or yue.in. baughn.in. or lal.in. or aina.in. or shah.in. or azimzai.in.) and I2	USPAT; US-PGPUB; EPO; JPO; DERWENT	2004/08/18 07:45
7	BRS	469	((fatty adj acid adj coenzyme adj A! adj ligase adj 5!) or (acyl-CoA adj synthetase))	USPAT; US-PGPUB; EPO; JPO; DERWENT	2004/08/18 07:45
8	BRS	9	(tang.in. or hillman.in. or bandman.in. or yue.in. baughn.in. or lal.in. or aina.in. or shah.in. or azimzai.in.) and 15	USPAT; US-PGPUB; EPO; JPO; DERWENT	2004/08/18 07:45